

# *RAIL & TRANSIT* **DIVISION**



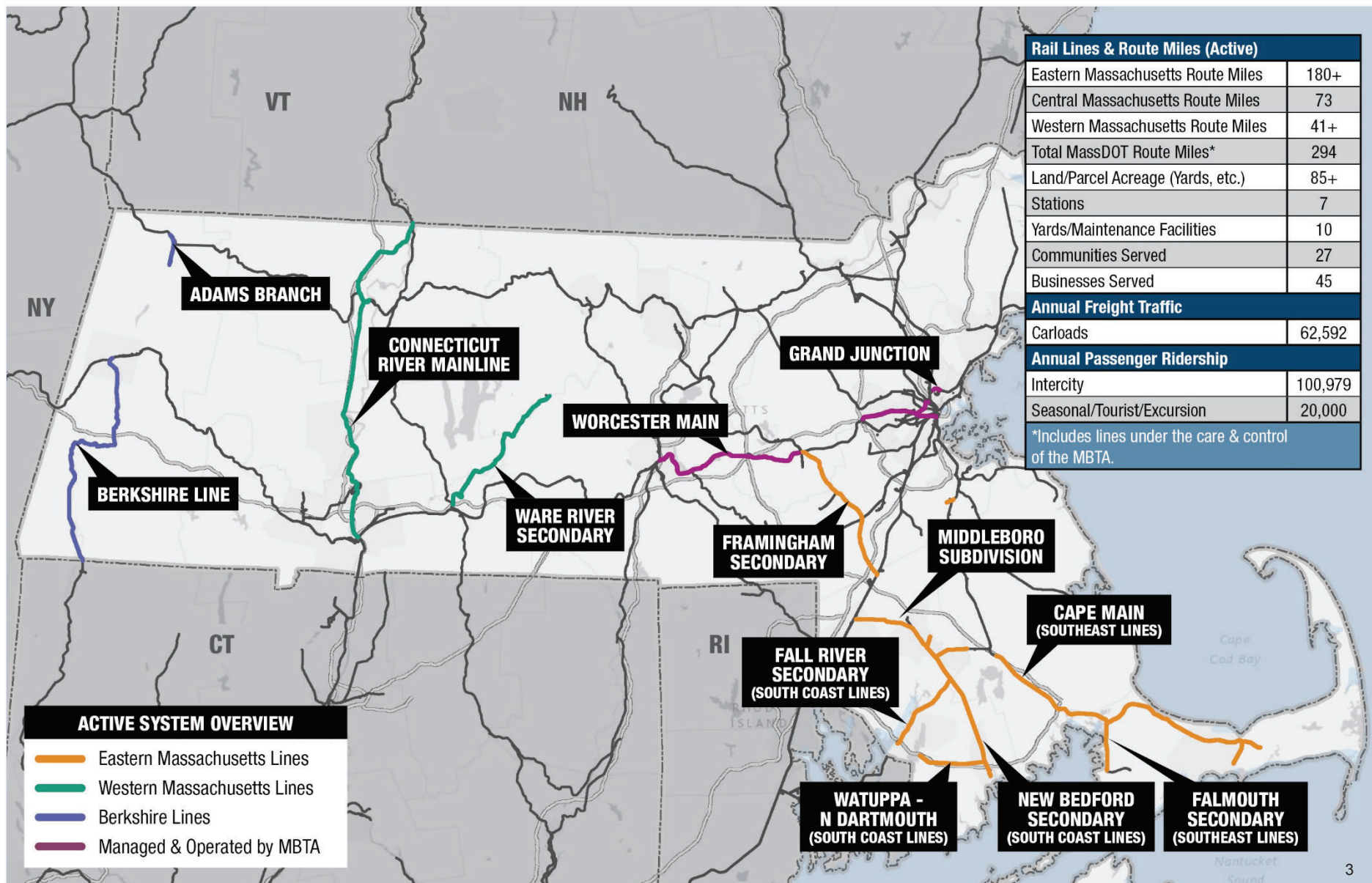


## MGL Chapter 161C Rail Transportation in the Commonwealth

It is hereby declared that rail transportation offers economic and environmental advantages with respect to land use air and noise pollution, energy efficiency, safety, and costs per ton mile of movement

- *to the extent that the preservation, development and maintenance of such services is a public purpose and in the public interest;*
- *that essential rail transportation services for the movement of passengers and freight are threatened with cessation or significant curtailment because of the deterioration or inadequacy of rail rights of way either earlier acquired for a public purpose, or because of the insufficiency or inadequacy of rail facilities and related equipment, and because of the inability of private railroad companies to provide such services or facilities without public financial assistance;*
- *that the public convenience and necessity require that the adequate and efficient rail services and facilities be provided in the commonwealth;*
- *that these needs cannot be met without substantial action by the commonwealth; and*
- *that it is the intent of the general court to provide for such action through an act which authorizes a public agency to plan for and carry out the steps necessary to acquire, preserve, develop and construct when necessary on lands not formerly owned or used by a railroad, which insures the maintenance and operation of, adequate and efficient rail rights of way, related facilities or equipment, and rail services.*

# MassDOT-Owned Rail System at a Glance





# Public Benefits of Rail

- Congestion relief –Massachusetts rail system annually carries a volume of freight equivalent to approximately 850,000 trucks trips.
- Accident reduction – Approximately 5 fatalities per year are avoided in Massachusetts due to the improved safety of intercity train travel as compared to auto travel.
- Energy efficiency – Intercity passenger rail service uses 33% less energy per passenger mile traveled than automobiles and 12% less than airline travel. On average, freight railroads are four times more fuel efficient than trucks.
- Emissions reduction – Every ton-mile of freight moved by rail instead of truck reduces greenhouse gas emissions by 75%.
- There are 823 freight railroad employees in Massachusetts with an average wage and benefits of \$91,720 annually.

\* Sources: Association of American Railroads; Ian Savage, “Comparing the Fatality Risks in United States Transportation Across Modes and Over Time”; United States Department of Energy.



# Preserving the System

## Rail Line Acquisition/Preservation

Nearly sixty percent of the active railroad system in Massachusetts is now publicly owned (25% MassDOT, 32% MBTA, 1% Amtrak/MWRA/Federal). This allows MassDOT to preserve and maximize the public benefits from this important transportation asset. Recent acquisitions include:

- June 2010, MassDOT acquired:
  - *South Coast Lines,*
  - *Boston Terminal Running Track,*
  - *West First Street Yard in South Boston, and*
  - *the Grand Junction Branch.*
- July 2012, MassDOT agreed to buy Connecticut River Line and completed the acquisition in 2015
- October 2012, MassDOT acquired the Boston Main Line from Framingham to Worcester
- January 2015, MassDOT purchased the Berkshire Line (Housatonic Railroad)
- June 2015, MassDOT completed acquisition of Framingham Secondary Rail Line
- October 2015, MassDOT completed acquisition of the Adams Branch

# Overview of MassDOT-Managed Rail Assets

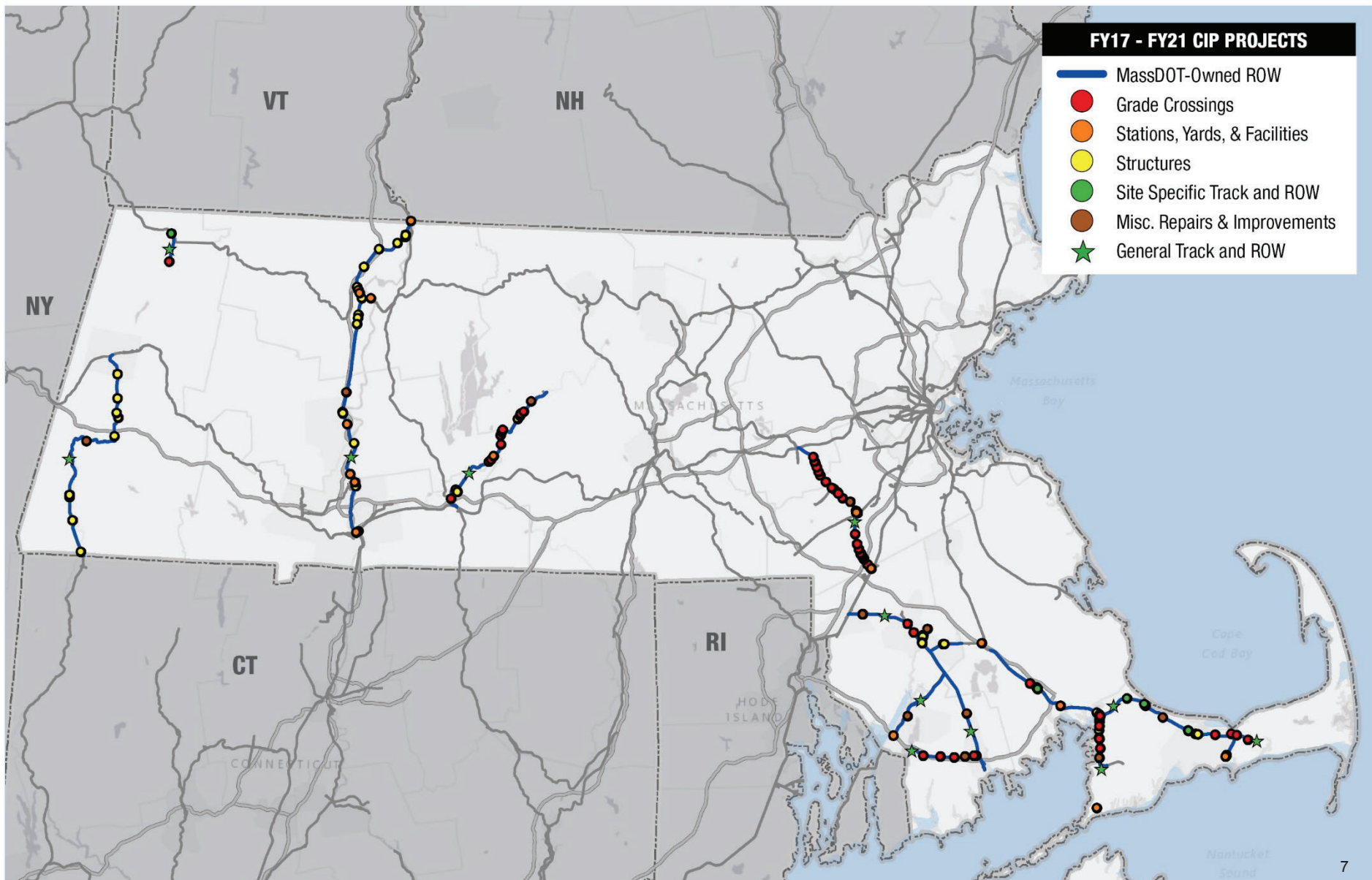
Segment	Total Active Route Miles	Public Grade Crossings	Private Grade Crossings	Undergrade Bridges	Culverts	Tunnels	Inter-lockings	Power Switches	Hand Throw Switches
<b>Eastern Massachusetts Lines</b>									
<b>Cape Main</b>	42.70	37	22	12	78		1	3	46
– Buzzards Bay Secondary	18.30			5					
– Hyannis Secondary	24.40			7					
<b>Other SE Lines</b>	11.00	10	9	11	10		1	1	13
– South Dennis Secondary	2.80								3
– Falmouth Secondary	6.70			7				1	3
– Dean Street Industrial Track	1.50			4					7
<b>Watuppa Branch/NDIT</b>	8.50	7		3	8				1
<b>South Coast Lines</b>	30.40	32	4	31	59				23
– Fall River Secondary	12.50			18					
– New Bedford Secondary	17.90			13					
<b>Framingham Secondary</b>	21.20	25	5	19	47			2	20
<b>Middleboro Subdivision</b>	18.20	12	2	11	30				23
<b>Randolph Secondary</b>	1.00								24
<b>Western Massachusetts Lines</b>									
<b>Conn River Main Line</b>	49.29	23	25	37	197	1	10	19	15
<b>Ware River Secondary</b>	23.35	19	17	9	79				
<b>Berkshire Lines</b>									
<b>Adams</b>	4.47	4	1	2	14				11
<b>Berkshire Line</b>	36.00	32	20	28	83				20
<b>Totals</b>	<b>246.11</b>	<b>201</b>	<b>105</b>	<b>163</b>	<b>605</b>	<b>1</b>	<b>12</b>	<b>25</b>	<b>196</b>

Note: Does not include lines in the care and control of the MBTA.



# Maintaining a State of Good Repair

Programmed Capital Repairs on MassDOT-Managed Rail System



# Supporting Economic Growth

Customers on MassDOT-Owned Lines rely on rail service

## MassDOT-owned lines support the economy of the Commonwealth:

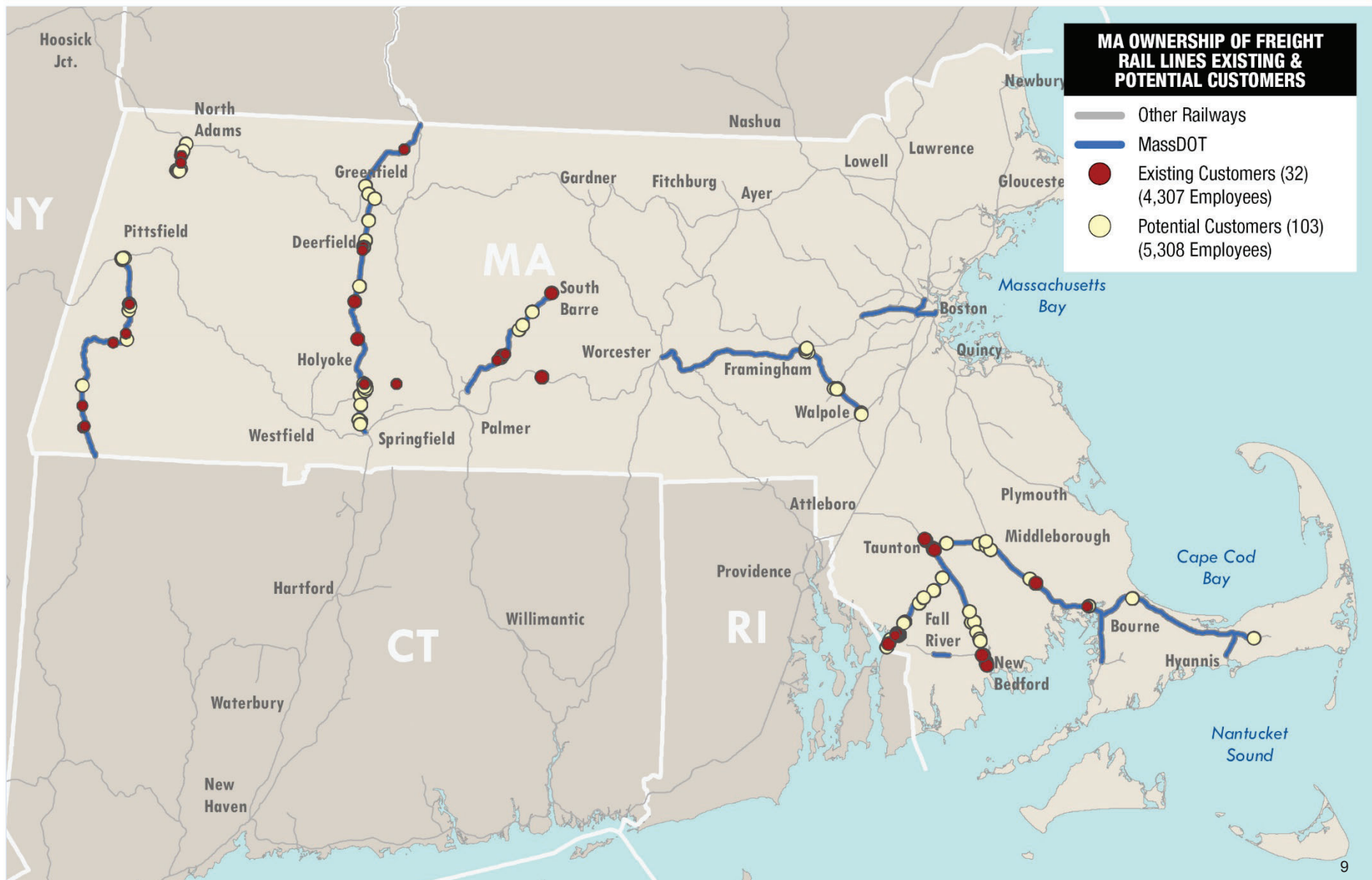
- Increases the value of goods and services sold in the Commonwealth (Economic Output) by \$850M annually
- Increases the annual value of Commonwealth-made products by \$385M
- Raises labor incomes in the Commonwealth by \$267M annually
- Supports over 4,300 jobs

Impact Metric	Direct	Indirect	Induced	Total
<b>Eastern Massachusetts Lines</b>				
<b>Output</b>	\$252.5	\$79.1	\$81.2	<b>\$412.8</b>
<b>Value Added</b>	\$123.3	\$46.0	\$49.5	<b>\$218.8</b>
<b>Labor Income</b>	\$89.8	\$32.8	\$30.5	<b>\$153.0</b>
<b>Employment</b>	1,313	454	569	<b>2,336</b>
<b>Western Massachusetts Lines</b>				
<b>Output</b>	\$143.1	\$64.4	\$30.4	<b>\$237.9</b>
<b>Value Added</b>	\$25.3	\$30.4	\$17.5	<b>\$73.2</b>
<b>Labor Income</b>	\$22.0	\$21.1	\$10.7	<b>\$53.8</b>
<b>Employment</b>	380	380	235	<b>994</b>
<b>Berkshire Lines</b>				
<b>Output</b>	\$138.9	\$27.6	\$32.1	<b>\$198.6</b>
<b>Value Added</b>	\$61.2	\$12.7	\$18.5	<b>\$92.4</b>
<b>Labor Income</b>	\$39.9	\$8.9	\$11.5	<b>\$60.4</b>
<b>Employment</b>	537	172	268	<b>977</b>
Output, value added, and labor income are expressed in 2016 million dollars.				

Note: Revenue and employment data for current customers on MassDOT-owned rail lines were obtained from InfoUSA, a third-party database that collects business information. This data was combined with IMPLAN input-output modeling system multipliers to estimate output, value added, employment, and wages.



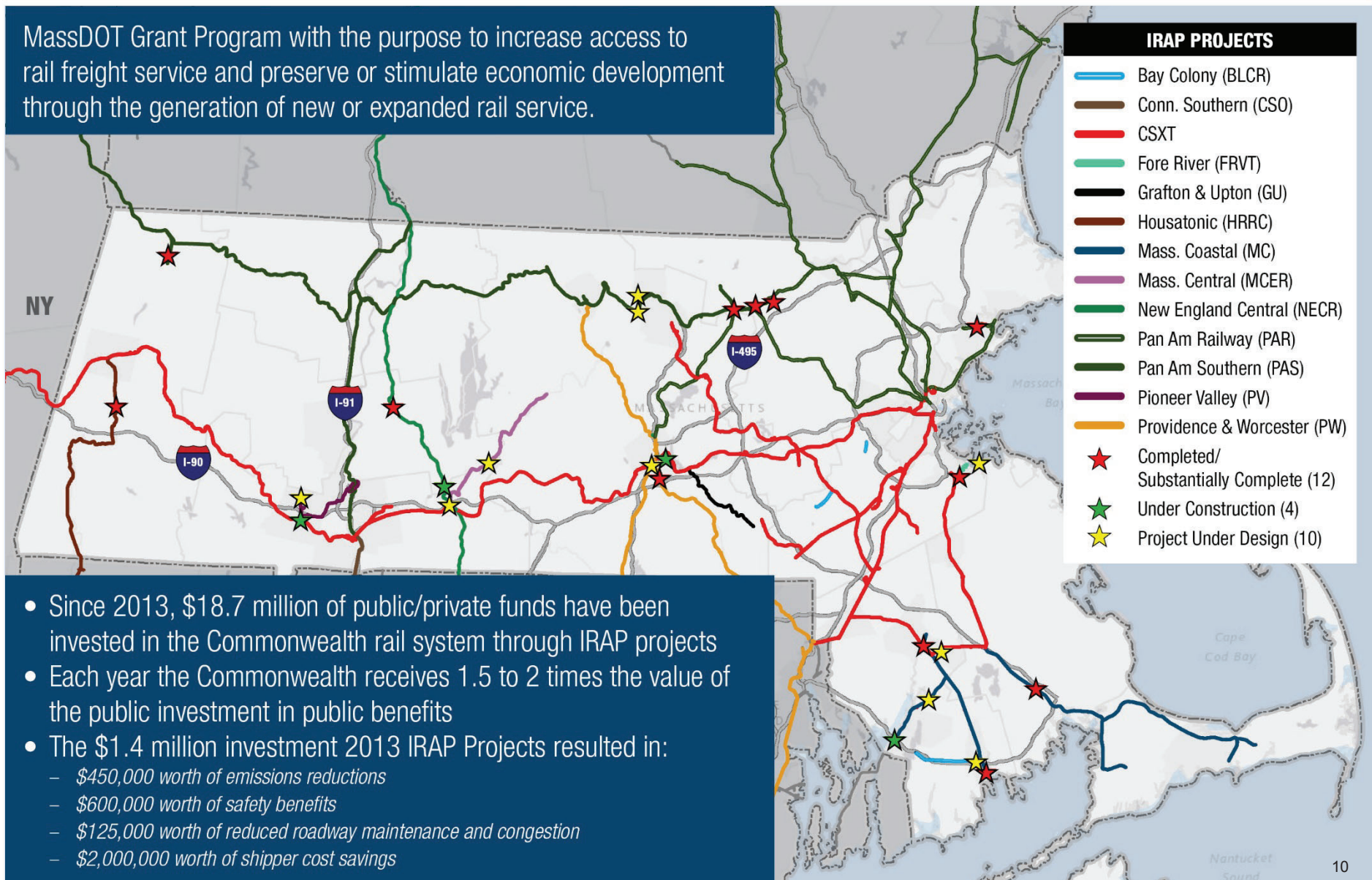
# Existing & Potential Rail Customers



# Supporting Economic Growth

## Industrial Rail Access Program (2013-2016)

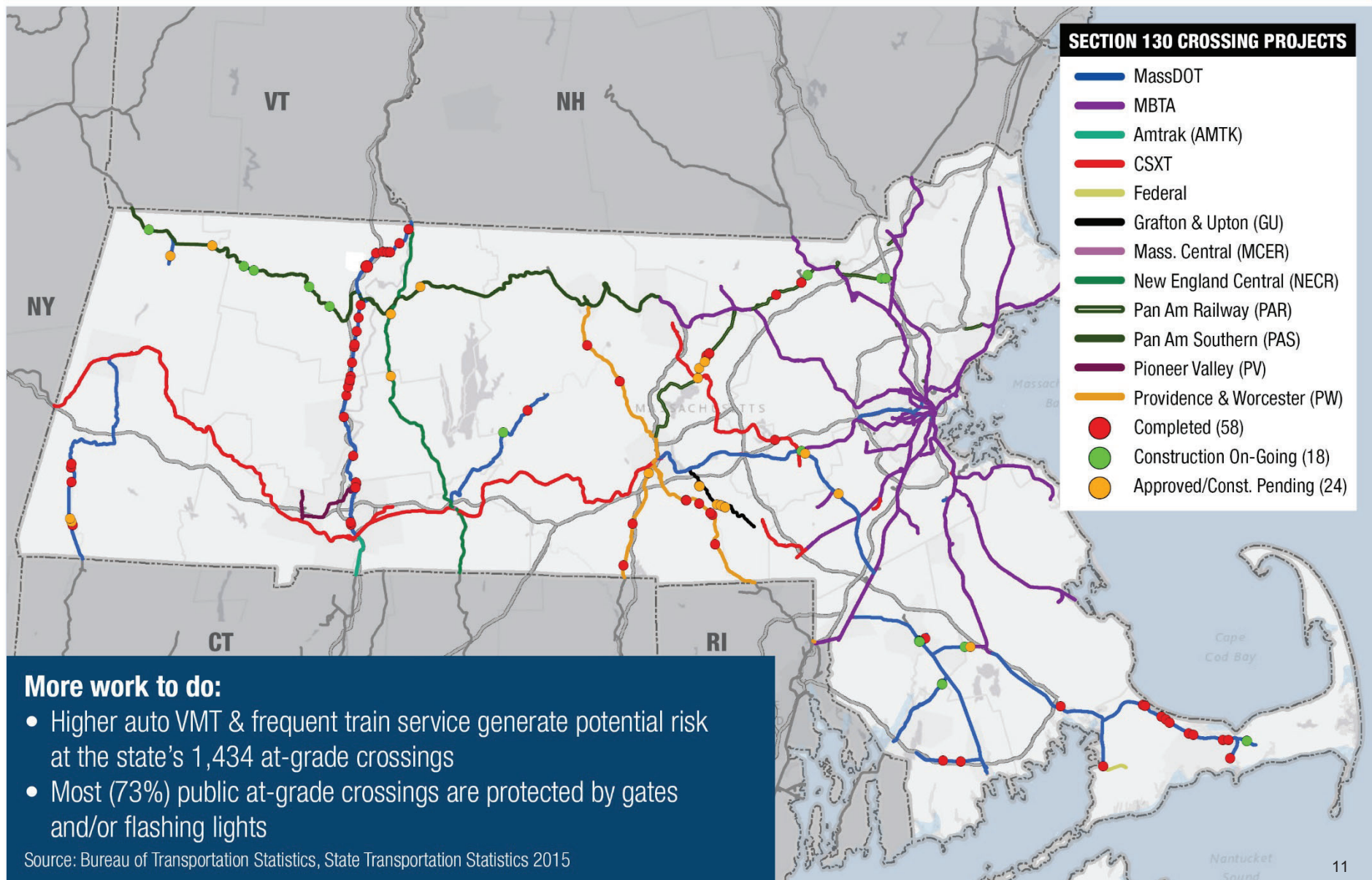
MassDOT Grant Program with the purpose to increase access to rail freight service and preserve or stimulate economic development through the generation of new or expanded rail service.





# Improving Safety

At-Grade Crossing Safety Projects (2010-2016)

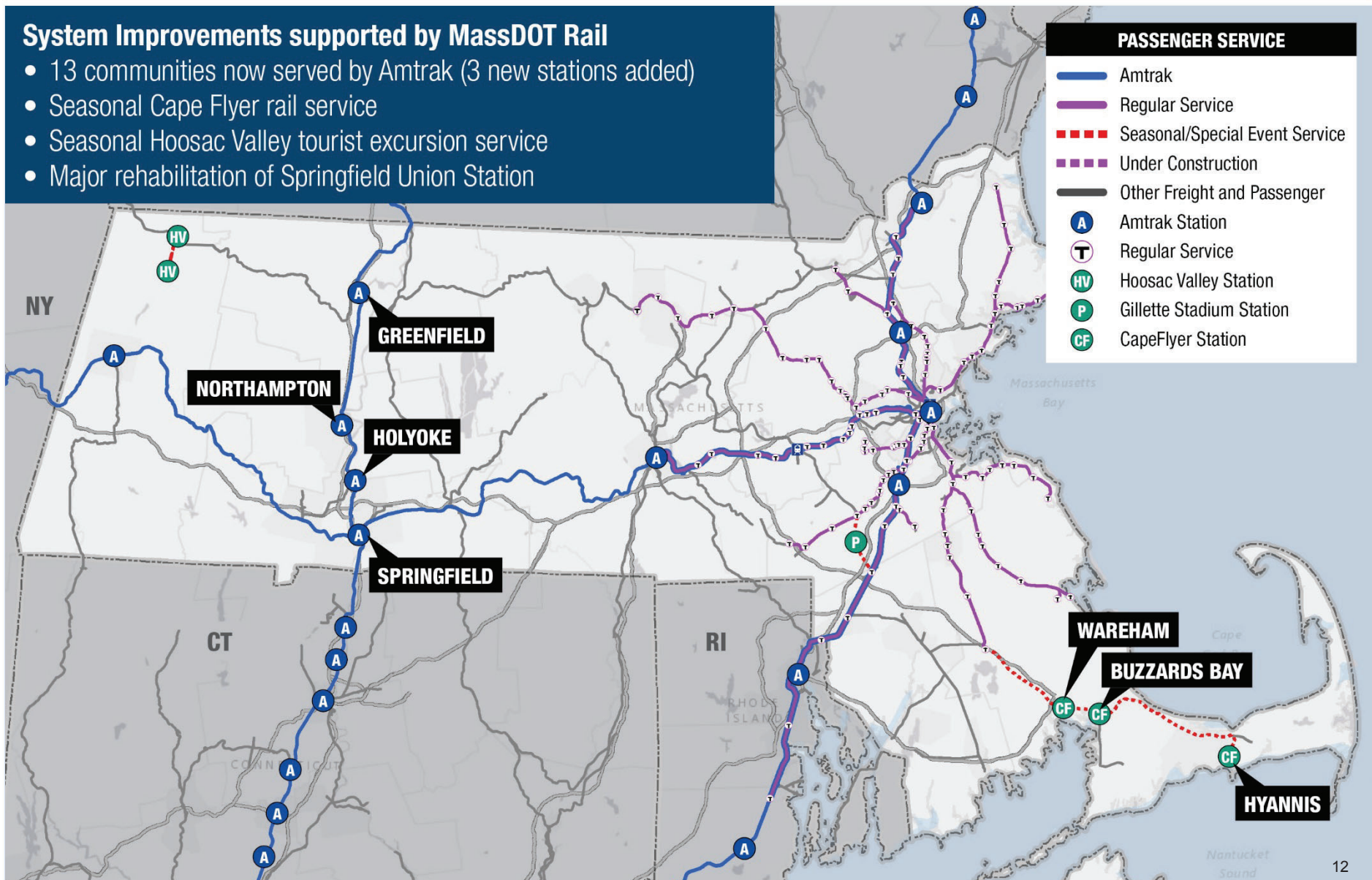


# System Improvements on MassDOT-Owned Rail

## Passenger Rail Service

### System Improvements supported by MassDOT Rail

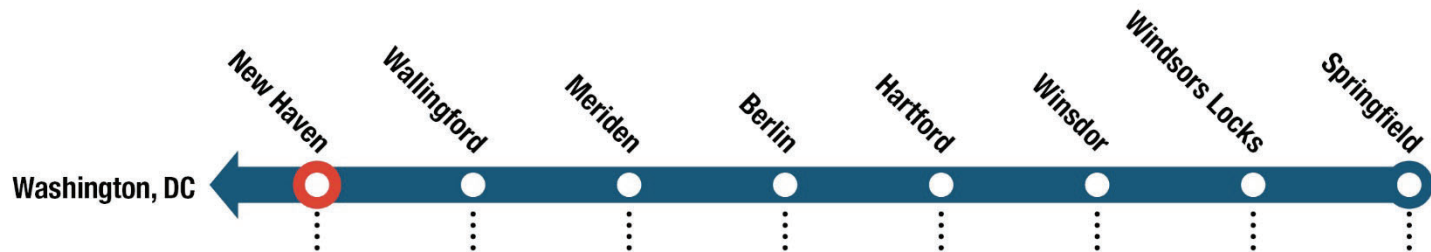
- 13 communities now served by Amtrak (3 new stations added)
- Seasonal Cape Flyer rail service
- Seasonal Hoosac Valley tourist excursion service
- Major rehabilitation of Springfield Union Station





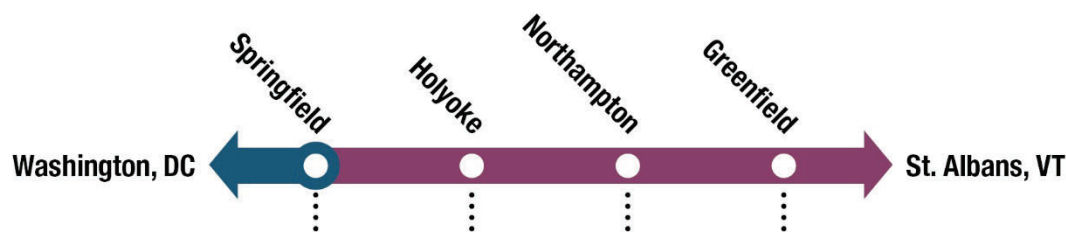
# MassDOT-Supported Amtrak Service (PRIIA209)

## SPRINGFIELD TO NEW HAVEN SERVICE



	New Haven	Wallingford	Meriden	Berlin	Hartford	Windsor	Windsors Locks	Springfield
One-Way Passenger Fare to New Haven		\$5.00	\$7.00	\$9.50	\$14.00	\$17.00	\$18.00	\$23.00
Miles from New Haven	0	12.4	18.4	25.7	36.4	42.7	47.2	61.9
Parking Capacity	1153	96+	16+	60+	197	30	100	377
Parking Utilization		■	■	■	■	■	■	
Annual Station Ridership (On & Off)	136,879	8,959	17,318	16,012	136,004	9,167	16,632	38,116
Station Accessibility	●	●	●	●	●	●	●	●
Average Daily Revenue Trips	280	11	36	39	338	20	38	203

## VERMONT SERVICE



	Springfield	Holyoke	Northampton	Greenfield
One-Way Passenger Fare to New York	\$35.00	\$41.00	\$41.00	\$41.00
Miles from Springfield	0	7	17	36
Parking Capacity	377	25	10	10
Annual Station Ridership (On & Off)	24,057	1203	17,332	5,920
Station Accessibility	●	●	●	●

### Station Accessibility

- Fully
- Partial
- Not Accessible

### Parking Utilization

- Partial 85%
- Not Accessible 50%

### Dispatching Control

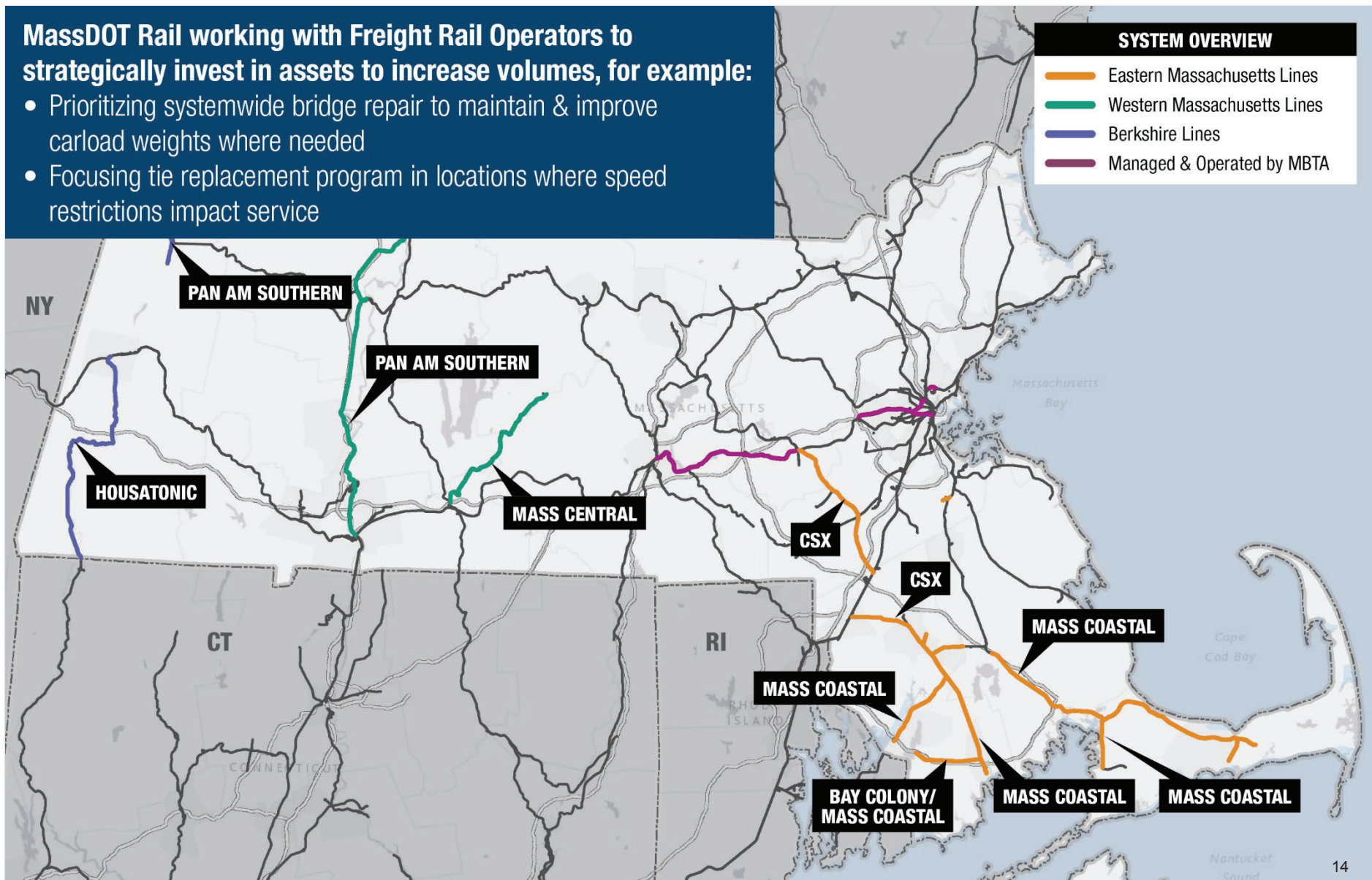
- MNR RTC NHV to Division Post
- Amtrak CETC Centralized Electrification
- PanAm Southern Traffic Control

# Improving Freight Connections

## Freight Operation on MassDOT-Owned Rail Lines

**MassDOT Rail working with Freight Rail Operators to strategically invest in assets to increase volumes, for example:**

- Prioritizing systemwide bridge repair to maintain & improve carload weights where needed
- Focusing tie replacement program in locations where speed restrictions impact service





# Overview of MassDOT-Owned System

Rail Line	Date Acquired	Route Miles	Active	Inactive	Maintain Transportation Services	Current/Future MBTA Service	Current/Future Other Passenger Service	Preserve for Other Transportation or Public Purposes
<b>Southeast Lines</b>	1982	63.7	53.7	10.0	●	●		●
– Buzzards Bay Secondary		18.3	18.3	0.0				
– Hyannis Secondary		24.4	24.4	0.0				
– South Dennis Secondary		5.7	2.8	2.9				
– Falmouth Secondary		13.8	6.7	7.1				
– Dean Street Industrial Track		1.5	1.5	0.0				
<b>Watuppa Branch</b>	1982	6.1	2.5	3.6	●			●
<b>Middleboro Subdivision</b>	1982	18.2	18.2	0.0	●	●	●	
– Attleboro Secondary		9.4	9.4	0.0				
– New Bedford Secondary		3.9	3.9	0.0				
– Middleboro Branch		4.9	4.9	0.0				
<b>Lowell Secondary</b>	1982	19.9	0.0	19.9				●
<b>Dighton Industrial Track</b>	1982	1.1	0.0	1.1				●
<b>Marion Pit Track</b>	1982	2.2	0.0	2.2	●			●
<b>Millbury Branch</b>	1982	2.7	0.0	2.7				●
<b>Randolph Secondary</b>	1982	1.0	1.0	0.0	●			●
<b>Southbridge Secondary</b>	2004	7.5	0.0	7.5				●
<b>South Coast Lines</b>	2010	32.2	30.4	1.8	●	●		
– Fall River Secondary		14.3	12.5	1.8				
– New Bedford Secondary		17.9	17.9	0.0				
<b>North Dartmouth I.T.</b>	2010	6.0	6.0	0.0	●	●		
<b>Framingham Secondary</b>	2015	21.2	21.2	0.0	●	●		
<b>Conn River Main Line</b>	2015	49.3	49.3	0.0			●	
<b>Ware River Secondary</b>	1982	23.4	23.4	0.0	●			
<b>Berkshire Line</b>	2015	36.0	36.0	0.0			●	
<b>Coltsville Industrial Track</b>	2015	1.9	0.0	1.9				●
<b>Adams Branch</b>	2015	4.5	4.5	0.0	●		●	
<b>Adams Branch</b>	1993	10.5	0.0	10.5				●
<b>Grand Junction Branch</b>	2010	6.1	3.5	2.6	●	●	●	●
<b>Boston Terminal Running Track</b>	2010	1.0	0.0	1.0	●	●		
<b>Worcester Main Line</b>	2012	33.3	33.3	0.0	●	●		
<b>Total</b>		<b>347.7</b>	<b>282.9</b>	<b>64.8</b>				15

# What is a State Rail Plan?

## **Objective: The State Rail Plan Update will seek to:**

- Provide an analysis that will guide future rail investment decisions
- Incorporate *new* PRIIA Expectations (Multi-State Planning)
- Enable Massachusetts to Apply for Federal Rail Funding

**Origins:** Federal Law (Section 303 of the Passenger Rail Investment and Improvement Act of 2008 (PRIIA))

## **Federal guidance for State Rail Plan outline**

- Role of Rail in Statewide Transportation
- Existing Rail Service
- Proposed Rail Improvements and Investments
  - *Passenger*
  - *Freight*
- State's Rail Service and Investment Program
  - *Prioritization of investments – 20 year vision and 4 year program*

## **Schedule**

- Evaluation of Projects – ongoing
- Draft to FRA – by Fall 2017



# Next Steps: Evaluation Process

## **Initial Project Identification & Development of Evaluation Criteria**

- Input from November Public Meetings & Stakeholders
- MassDOT Rail Planning Goals & Objectives

## **Phase 1 Evaluation Criteria**

- Initial Evaluation/ Ranking of projects (including SGR needs) based on established criteria.

## **Identification of Projects for Economic Analysis (Phase 2)**

- Selection of Projects based on Phase 1 Evaluation/Ranking

## **Phase 2 Benefit-Cost Analysis**

- Determine the Long-Term Benefits for Top State-Wide Projects

## **Finalization of State Long-Term Plan**

- Fall 2017